

## **ABSTRACT OF THE DISCLOSURE**

Various embodiments of methods and systems for storing multiple groups of microcode operations and corresponding control sequences per row of microcode ROM are disclosed. In one embodiment, an integrated circuit may include a microcode ROM coupled to a control sequence logic unit. The microcode ROM may store multiple groups of microcode operations per row. For each group of microcode operations stored in a row, a corresponding control sequence may also be stored in the row. Each group of microcode operations may be included in a microcode routine. The groups of microcode operations stored in a row may be included in the same microcode routine, or some of the groups may be included in different microcode routines.